

Defies Measurement

Activity Guide – Brain-Compatible Elements

Discuss the topic below and then make a presentation to the group. The presentation will be in the form of a proposal to the local school board. Using the information you learn about Brain-Compatible Elements, be sure to state the problem that currently exists in the local school or district and then lay out the proposed solution. Or, if there isn't a problem, then propose a new plan that would add something positive to the school and/or district.

BRAIN-COMPATIBLE ELEMENTS

In *Defies Measurement*, both Terri Elkin and David Kleine refer to the Brain-Compatible Elements when they talk about teaching at Chipman Middle School. These ten elements were developed by Susan Kovalik who translated the research of neuroscience into action within the classroom. The ten Brain-Compatible Elements are as follows:

Absence of Threat: Threat, either real or perceived, significantly restricts (or eliminates) the students' abilities to engage fully in the learning process. Instructors must orchestrate a safe learning environment free of anxiety, where no threat is present (either real or perceived) and all participants feel safe to share, learn, explore, and exist in a culture of respect. Create an environment filled with meaning to invite thoughtfulness, introspection, and the mental habit of thinking things through.

Sensory-Rich "Being There Experiences": "*Being There*" experiences are rich in sensory interaction in real-world locations where all 20 senses and mirror neurons can be activated. "*Being There*" locations anchor curriculum for students by illustrating how the concepts and skills appear in real life and how those who work at or visit the location interact with the environment and perform tasks with resources that are available to them.

Meaningful Content: Meaningful Content is determined by each learner. It digs deeply into the learner's pool of intrinsic motivation and provides focus for the ever active brain, harnessing attention and channeling effort. When the content of the material being taught is meaningful to learners, it builds conceptual understanding, and can be experienced – thus providing real-life context and engaging students in the learning process.

Enriched Environment: The learning environment should reflect a healthful, inviting, and comfortable setting providing an immersion area with many resources from which students can learn. Special emphasis should be placed on real places, people, and objects to provide real-life context for that learning. The enriched learning environment is bodybrain-compatible in that it has designated areas for further exploration of material, group work, team projects, reflection, and movement.

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Movement to Enhance Learning: Current brain research has revealed that the body and mind are a partnership – one cannot be developed without the other. This has confirmed the importance of movement in a learning environment. Movement is critical to every brain function, including memory, emotion, language, and learning. Therefore, movement activates and focuses the bodybrain systems for optimal learning.

Choices: It is clear that all students do not learn in the same manner, nor do they have the same interests. Parents know this and so do teachers. In HET classrooms, students are given options (Choices) to demonstrate understanding through multiple intelligences, higher level thinking, and personality preferences so that students can master required curriculum, explore potential career interests, and acquire the skills to be lifelong learners.

Adequate Time: It takes time to extract meaningful patterns and it takes time to acquire useful programs. Enough time must be given so each learner can thoroughly explore, understand, and use ideas, information, and skills. One of the greatest gifts a teacher can give the student is adequate time to sort through the information, establish the meaning of it all, develop a mental program for using and remembering what is learned, and apply what is learned to his/her own personal life.

Collaboration: The use of the word "collaboration" (rather than cooperation) is deliberate. *Merriam-Webster's Dictionary* states: "the act of working jointly with others or together especially on an intellectual endeavor." This means working together toward a common goal – mastery. This leads toward career skills in communication and interaction for solving problems, exploring, and creating when learning or performing.

Immediate Feedback: Immediate feedback is a necessary element in the successful learning environment – both for pattern-seeking and for program-building (the two steps of the learning process). Receiving feedback that is immediate and ongoing ensures effective first learning by assembling sensory input into understandable components and allowing the correct use of what is understood as well as orchestrating the situation for students to explain to others what is learned.

Mastery: The focus must be shifted to what is learned – what the student understands and can do with it – rather than on what was taught or covered by the instructor. A focus on Mastery ensures that students acquire mental programs (step two of the learning process) to use what is learned in the real-life situations and that such programs get stored in long-term memory.

For discussion:

How have you seen any of these elements used in your local school or in your own life?
What are the benefits?

What needs to happen within a school to support these elements?